Draft Environmental Assessment of Proposed 4(d) Protective Regulations for Puget Sound Steelhead

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ABSTRACT

The National Marine Fisheries Service (NMFS) is reviewing the status of Puget Sound steelhead (*Oncorhynchus mykiss*) and has proposed to list this Distinct Population Segment (DPS) as threatened under the Endangered Species Act (ESA). The agency is presently reviewing comments on the proposed listing as well as options for applying protective regulations for this DPS in the case that it warrants a final listing as a threatened species.

Although listing determinations and the promulgation of protective regulations are non-discretionary actions not subject to the National Environmental Policy Act (NEPA), NMFS does have discretion in determining which specific protective regulations are necessary and advisable for the conservation of threatened DPSs. Accordingly, the promulgation of such regulations is subject to the requirements of NEPA.

NMFS recently revised and simplified protective regulations for listed salmon and steelhead by making all threatened DPSs subject to the same regulations (70 FR 37160, June 28, 2005; 71 FR 834, January 5, 2006; 71 FR 5178, February 1, 2006). Additionally, NMFS revised the protective regulations so that the ESA section 9 take prohibitions do not apply to adipose-fin-clipped hatchery fish. These changes are in effect for all threatened salmon and steelhead DPSs and are now being considered for Puget Sound steelhead in the event that they too are listed as a threatened species.

This Environmental Assessment (EA) describes three alternative approaches to dealing with protective regulations for this DPS, including a proposed action that extends the regulatory approach implemented for other threatened salmon and steelhead to Puget Sound steelhead. This EA assesses the environmental impacts of the alternative actions relative to baseline conditions established by existing laws and regulations in the context of the proposed threatened listing for this DPS.

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ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
DPS	Distinct Population Segment
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FFR	Forest and Fish Report
FMEP	Fishery Management and Evaluation Plan
FR	Federal Register
HGMP	Hatchery and Genetic Management Plan
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
O.	Oncorhynchus
ODOT	Oregon Department of Transportation
RRMP	Routine Road Maintenance Program
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife

1. PURPOSE OF AND NEED FOR ACTION

1.1 DESCRIPTION OF PURPOSE AND NEED

The purpose of the proposed action is to conserve Puget Sound steelhead, currently proposed ESA listing as a threatened species, using the flexibility of ESA section 4(d) protective regulations to prohibit take[1] only to the extent needed for conservation. The proposed action is needed to ensure that the Puget Sound steelhead DPS is appropriately protected from take if it is listed as a threatened species. In developing the proposed listing determination for this DPS, NMFS evaluated existing protections to determine if the cumulative effect of these protections provides for its conservation (71 FR 15666, March 29, 2006). NMFS has determined that existing protections do not as yet individually or collectively reduce the extinction risk for this DPS. Therefore, the agency deems it necessary and advisable to adopt regulations prohibiting take of the DPS, except in certain specified circumstances.

1.2 BACKGROUND OF REGULATORY AUTHORITIES

Section 4(a) of the ESA requires NMFS to list species it determines are threatened or endangered[2] after conducting a review of the species' status and evaluating efforts being made to protect it. The ESA defines "species" to include subspecies and any "distinct population segment" of vertebrate fish or wildlife that interbreeds when mature. For Pacific salmon, NMFS has adopted a policy defining DPSs as "evolutionarily significant units" or ESUs (56 FR 58612, November 20, 1991). The ESU policy is a detailed extension of a joint policy of the U.S. Fish and Wildlife Service (USFWS) and NMFS (61 FR 4722, February 7, 1996) which establishes criteria for delineating DPSs of non-salmon species (including the anadromous "steelhead" and resident "rainbow trout" life forms of *O. mykiss*). The joint policy adopts criteria similar to, but somewhat different from, those in the ESU policy and was applied in NMFS status review and proposed listing of Puget Sound steelhead.

For species listed as endangered, section 9(a) of the ESA prohibits activities that result in take. For species listed as threatened, section 4(d) of the ESA requires the Secretary of Commerce to issue such regulations as are deemed necessary and advisable to provide for the conservation of the species. These 4(d) protective regulations, or "4(d) rules," may prohibit, with respect to threatened species, some or all of the acts that section 9(a) of the ESA prohibits with respect to endangered species. Both the section 9(a) prohibitions and section 4(d)

[1] Under the ESA the term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

regulations apply to all individuals, organizations, and agencies subject to United States jurisdiction.

Previously, NMFS adopted section 4(d) rules that applied all of the section 9(a) take prohibitions for endangered species to threatened species. Beginning in 1997 NMFS began to use its authority under section 4(d) to tailor specific protective regulations to "limit" the application of take prohibitions for a range of activities determined to be consistent with the conservation of the listed species. The specific regulations (commonly referred to as "limits") addressed an array of activities, including salmonid research, habitat restoration, and harvest and hatchery management. NMFS created a mechanism whereby parties could obtain an approval certifying that their proposed activity qualified under one of the limits and, therefore, was not a prohibited take under the ESA.[3] Currently, there are 14 limits applicable to one or more threatened DPS of salmon and steelhead. Comprehensive descriptions of each 4(d) limit are contained in *A Citizen's Guide to the 4(d) Rule* (NMFS, 2000). This document is available in previously published Federal Register (FR) documents (62 FR 38479, July 18, 1997; 65 FR 42422, July 10, 2000; 65 FR 42485, July 10, 2000; 67 FR 1116, January 9, 2002) and on the Internet at the following address: http://www.nwr.noaa.gov/ESA-Salmon-Regulations-Permits/4d-Rules/Index.cfm).

In 2005 NMFS revised and simplified existing 4(d) protective regulations for threatened salmon and steelhead DPSs by making them all subject to the same prohibitions and limits thereof (70 FR 37160, June 28, 2005). Additionally, NMFS modified the application of the take prohibitions so that they do not apply to adipose-fin-clipped hatchery fish. NMFS determined that these revisions would minimize the regulatory burden of managing threatened listings, while retaining the necessary and advisable protections to provide for the conservation of threatened steelhead DPSs. The resultant protective regulations are codified in the Code of Federal Regulations (CFR) at 50 CFR 223.203. The rulemakings associated with these revisions were supported by a June 2005 analysis under NEPA, which is incorporated by reference (NMFS, 2005a).

Regardless of whether a species is listed as endangered or threatened, the ESA provides other protections for listed species. In particular, Section 7(a)(2) of the ESA requires that each Federal agency shall, in consultation with and with the assistance of NMFS, ensure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued

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[2] The ESA defines an "endangered" species as a species in danger of extinction throughout all or a significant portion of its range, while a "threatened" species is one that is likely to become endangered in the foreseeable future.

[3] The 4(d) limits themselves are not prescriptive regulations. The fact that an activity is not conducted within the specified criteria for a limit does not necessarily mean that the activity violates the ESA or the proposed protective regulations. Many activities do not affect the threatened DPSs covered by NMFS' 4(d) protective regulations, and, therefore, need not be conducted within a given limit to avoid take violations.

existence of an endangered or threatened salmon or steelhead ESU or result in the destruction or adverse modification of areas designated as critical habitat. Also, under section 10 of the ESA NMFS may issue permits for direct or indirect take otherwise prohibited by section 9 for scientific purposes, to enhance the propagation or survival of the affected species, or to conduct otherwise lawful activities identified in a conservation plan that may result in the incidental take of a listed species.

1.3 DESCRIPTION OF PROPOSED ACTION

NMFS is completing a status review of Puget Sound steelhead, and has published a proposal to list this DPS as threatened under the ESA (71 FR 15666, March 29, 2006). A final listing determination is due within one year of the proposal.[4] In the event that the DPS is listed as a threatened species the agency intends to issue 4(d) protective regulations deemed necessary and advisable to provide for the conservation of the DPS.

The proposed listing is non-discretionary, is not subject to the requirements of NEPA, and therefore is not discussed in this EA. In contrast, while the ESA section 4(d) requirement to adopt protective regulations is also mandatory, the Secretary does have discretion in specifying regulations he deems necessary and advisable to provide for the conservation of threatened species (see subsection 1.2, Background of Regulatory Authorities). Accordingly, the promulgation of 4(d) protective regulations is subject to the requirements of NEPA and is the proposed action analyzed in this EA. The baseline for the analysis of alternatives in this EA is the regulatory landscape that would exist once the (non-discretionary) listing determination takes effect.

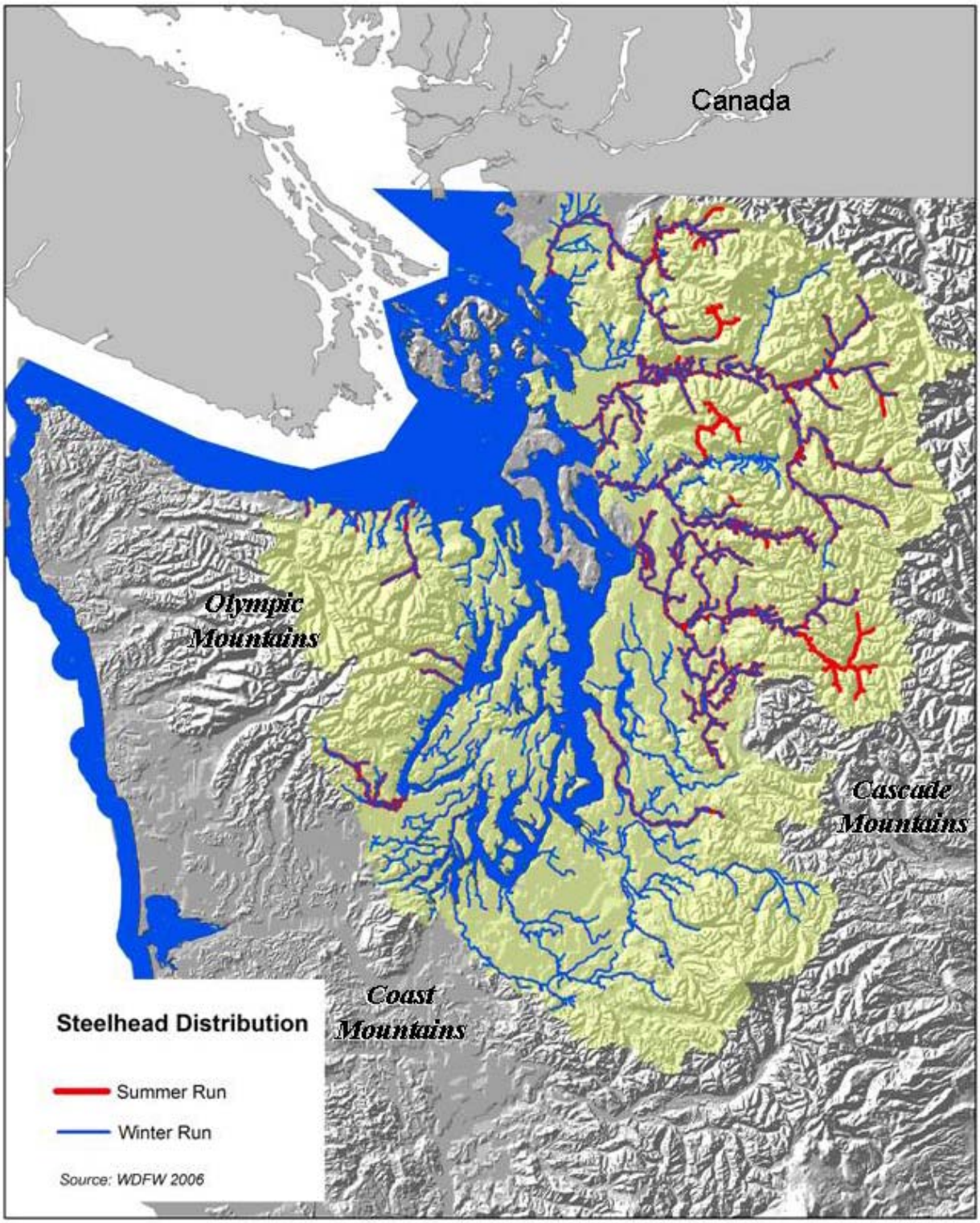
1.4 ACTION AREA—PUGET SOUND, WASHINGTON

The Puget Sound steelhead DPS is proposed to include "all naturally spawned anadromous winter-run and summer-run *O. mykiss* (steelhead) populations, in streams in the river basins of the Strait of Juan de Fuca, Puget Sound, and Hood Canal, Washington, bounded to the west by the Elwha River (inclusive) and to the north by the Nooksack River and Dakota Creek (inclusive), as well as the Green River natural and Hamma Hamma winter-run steelhead hatchery stocks" (71 FR 15666, March 29, 2006). The unique fjord-like ecosystem inhabited by this DPS comprises an action area that includes a multitude of rivers, estuaries, and marine waters bounded on the east by the Cascade Mountain Range and on the west by the Olympic Mountains. Its northern extent reaches the international boundary between the United States and

[4] However, section 4(b)(6)(B)(i) of the ESA authorizes NMFS to extend the deadline for a final listing determination for not more than 6 months for the purpose of soliciting additional data . NMFS' ESA implementing regulations at 50 CFR 424.17(a)(1)(iv) condition such an extension on finding "substantial disagreement among scientists knowledgeable about the species concerned regarding the sufficiency or accuracy of the available data relevant to the determination."

Canada, while its southern extent ends at the base of the low hills of the Coast Mountain Range near Olympia. The surrounding land mass of the action area includes approximately 13,600 square miles (20 percent of the total surface land mass within Washington state). The Washington Department of Fish and Wildlife (WDFW) estimates that this DPS occupies more than 3,100 stream miles within the action area (WDFW 2006) (Figure 1-1). Puget Sound steelhead also inhabit marine waters of the North Pacific Ocean, however it is not possible to identify with certainty the areas within this vast expanse that are likely to be affected by the actions addressed in this EA.

Figure 1-1. Range of the Puget Sound steelhead Distinct Population Segment (DPS) proposed for "threatened" status under the Endangered Species Act. The DPS includes both winter- and summer-run life history types.



2. ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This EA describes and evaluates three alternatives for addressing ESA 4(d) protective regulations for the Puget Sound steelhead DPS. The environmental impacts of the alternative actions were assessed relative to baseline conditions established by existing laws and regulations, including other protections that accrue under ESA if the DPS is listed. This EA was prepared in accordance with Council on Environmental Quality regulations for implementing NEPA (40 Code of Federal Regulations Parts 1500-1508) and National Oceanographic and Atmospheric Administration environmental review implementing procedures (Administrative Order 216-6, May 20, 1999).

2.1 ALTERNATIVE 1 (NO ACTION)

This alternative would reflect a finding by NMFS that no ESA protective regulations are needed for the conservation of the Puget Sound steelhead DPS. While other provisions of the ESA would still apply to this DPS (e.g., section 7 consultations and permitting actions under section 10), there would be no prohibitions on non-Federal actions that take listed steelhead. Under a no-action alternative it is possible, but speculative, that existing protective regulations for ESA-listed Chinook and summer-run chum salmon may provide some level of protection for this DPS.

2.2 ALTERNATIVE 2 (PROPOSED ACTION)

This alternative consists of applying the ESA 4(d) protections and limits promulgated in 2005 (located in agency regulations at 50 CFR 223.203 – see subsection 1.2 Background and Regulatory Authorities) to the Puget Sound steelhead DPS. In keeping with recent updates to NMFS' ESA section 4(d) regulations, the agency would apply the ESA section 9(a)(1) prohibitions (subject to the "limits" discussed below) to unmarked steelhead with an intact adipose fin that are part of the Puget Sound steelhead DPS. Juvenile hatchery steelhead are typically marked by clipping off their adipose fin just prior to release into the natural environment as a means of distinguishing them from fish of natural origin. Most unmarked steelhead in this DPS are of natural origin. However some hatchery steelhead are released unmarked. Unmarked hatchery fish that are surplus to the recovery needs of this DPS and that are otherwise distinguishable from naturally spawned fish in the DPS (e.g., by run timing or location) may be made not subject to the 4(d) prohibitions by limits (b)(4) and (b)(6) of 50 CFR 223.203 for fishery management plans, as well as under 50 CFR 223.209 for tribal resource management plans. This approach provides an effective means to manage the artificial

propagation and directed take of threatened Puget Sound steelhead while providing for the species' conservation and recovery.

Placing specific limits on the application of section 9(a)(1) prohibitions for this DPS will allow NMFS to not apply these prohibitions to certain activities, provided the activities meet specific conditions to adequately protect the species. In this rule the agency is proposing to protect Puget Sound steelhead using the same 14 limits currently in place for other threatened Pacific salmon and steelhead. These limits, codified in agency regulations at 50 CFR 223.203, address: activities conducted in accordance with ESA section 10 incidental take authorization (50 CFR 223.203(b)(1)); scientific or artificial propagation activities with pending permit applications at the time of rulemaking (223.203(b)(2)); emergency actions related to injured, stranded, or dead salmonids (223.203(b)(3)); fishery management activities (223.203(b)(4)); hatchery and genetic management programs (223.203(b)(5)); activities in compliance with joint tribal/state plans developed within United States (U.S.) v. Washington or U.S. v. Oregon (223.203(b)(6)); scientific research activities permitted or conducted by the states (223.203(b)(7)); state, local, and private habitat restoration activities (223.203(b)(8)); properly screened water diversion devices (223.203(b)(9)); routine road maintenance activities (223.203(b)(10)); Portland parks pest management activities (223.203(b)(11)); certain municipal, residential, commercial, and industrial development and redevelopment activities (223.203(b)(12)); forest management activities on state and private lands within the State of Washington (223.203(b)(13)); and activities undertaken consistent with an approved tribal resource management plan (223.204).

More comprehensive descriptions of each ESA section 4(d) limit are contained in Appendix A, in previously published Federal Register notices (62 FR 38479, July 18, 1997; 65 FR 42422, July 10, 2000; 65 FR 42485, July 10, 2000; 67 FR 1116, January 9, 2002), and on the Internet at http://www.nwr.noaa.gov/ESA-Salmon-Regulations-Permits/4d-Rules/Index.cfm.

2.3 ALTERNATIVE 3

Under this alternative NMFS would promulgate a 4(d) rule that applies all ESA section 9(a) take prohibitions to the Puget Sound steelhead DPS with no limitations on take. This alternative would effectively treat this DPS as if it were an endangered species. Other protective provisions of the ESA would also apply to this DPS (e.g., section 7 consultations and permitting actions under section 10).

2.4 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

NMFS considered two other possible alternatives that are not analyzed in this document. The first of these was similar to the No Action Alternative except that NMFS would not make a

finding on the matter of whether or not to issue protective regulations (i.e., no Federal action). NMFS did not analyze this alternative because it is inconsistent with the provisions of ESA section 4(d) as well as the agency's conclusion that "at present, protective efforts in Puget Sound do not substantially mitigate the factors threatening the DPS's future viability" (71 FR 15677, March 29, 2006). The second possible alternative considered whether it was necessary and advisable to issue protective regulations consisting of a subset of the 14 limits promulgated in 2005 because some of the existing limits may not apply to this DPS (e.g., Limit 11 - Portland, Oregon, Parks and Recreation's integrated pest management program). NMFS did not analyze this alternative because it would be inconsistent with the approach used for other threatened DPSs and would likely confuse the public. Also, keeping the existing salmon/steelhead 4(d) regulations consolidated makes them easier to manage for all threatened DPSs and more accessible and understandable to the affected public.

No other possible alternatives were identified within the reasonable range of alternatives for the scope of this action.

3. AFFECTED ENVIRONMENT

This EA does not include analyses of site-specific resources since it analyzes policy changes rather than the implementation of those policy decisions. However, general and broad impacts can be assessed for those resources that might be affected by the policy changes that would occur under the alternatives. The potential impacts would likely be limited to the following resources: biological (primarily fish), habitat, socioeconomics (primarily fishery-related), federal trust and treaty responsibilities to Tribes, and environmental justice. No other resources are expected to be impacted by the proposed action, so they were not included in the Affected Environment discussion, or in Chapter 4, Environmental Consequences.

3.1 BIOLOGICAL RESOURCES

3.1.1 Fish

The alternatives addressed in this EA are are most likely to affect Puget Sound steelhead. However, other co-occurring salmonids with similar life histories, habitat use patterns, and susceptibility to fishing-related impacts may also be affected. Depending on the particular stream, steelhead co-occur and interact with these other fishes via competition and predation (both as predators and prey). Table 3-1 identifies these fish species, three of which are presently listed as threatened under the ESA and all of which are subject to Washington state fishing regulations.

Hatchery steelhead production in this DPS is widespread, consisting of 25 hatchery stocks managed primarily to support harvest (71 FR 15666, March 29, 2006). Most of the thousands of hatchery steelhead propagated in the Puget Sound region are winter-run steelhead derived from a single stock (the Chambers Creek hatchery stock) that is indigenous to the ESU but generally is not native to the local river basins where it is propagated. The summer steelhead hatchery programs in the Puget Sound area are derived from an out-of-ESU stock (the Skamania summer steelhead stock from the Columbia River). The Skamania hatchery stock has generally been introduced in river systems where summer steelhead did not naturally exist, although it has been introduced in some Puget Sound river basins having native summer steelhead populations (e.g., the Stillaguamish and Snohomish Rivers).

WDFW employs a hatchery management strategy of promoting isolation between hatchery and natural stocks by releasing smolts early and selecting for early spawn timing in winter steelhead hatchery programs. This separation in run timing is intended to: allow for high rates of selective harvest on returning hatchery fish, while limiting harvest mortality on wild stocks; and minimize competition (as smolts and adults) and opportunities for interbreeding

between naturally spawning hatchery fish and wild fish. However, the separation of run timing is seldom complete. High harvest rates targeting early-returning hatchery fish have likely resulted in high mortality levels for early-run natural fish and reduced the natural diversity in spawn timing. Naturally spawning hatchery fish comprise a substantial proportion of the spawning escapement in many of the rivers in the ESU, possibly competing with, and posing genetic risks to, the local steelhead populations. Given the widespread and high levels of production of hatchery fish not included in the Puget Sound steelhead DPS, NMFS scientists concluded that the overall negative effect of artificial propagation in the Puget Sound area likely outweighs any potential positive effects (NMFS, 2005b). In its listing proposal NMFS concluded that potentially harmful hatchery practices may pose ecological and genetic risks to natural steelhead populations and may represent a factor limiting the viability of the Puget Sound steelhead DPS into the foreseeable future. (71 FR 15666, March 29, 2006).

With these risks in mind, the state of Washington is currently developing steelhead plans and policies designed to ensure that the use of artificial propagation is conducted in a manner consistent with the conservation and recovery of natural, indigenous steelhead populations. The role of artificial propagation in the conservation and recovery of salmon and steelhead populations continues to be the subject of vigorous and well funded scientific research in this and other salmonid DPSs.

Present-day recreational and tribal fisheries for Puget Sound steelhead are implemented to harvest marked hatchery-origin fish only, and are managed in time to target early run hatchery-origin fish and minimize the incidental harvest of early-returning natural steelhead. Existing steelhead fisheries in Puget Sound, while appropriately minimizing potential adverse impacts on natural steelhead populations, may still result in the continued mortality of early-returning natural steelhead via authorized tribal net fisheries, hook-and-release mortality in recreational fisheries, and poaching. Although overutilization was a factor that contributed to the present decline of Puget Sound steelhead populations, in its listing proposal NMFS noted that overutilization is not believed to be a factor limiting the viability of the Puget Sound steelhead DPS into the foreseeable future (71 FR 15666, March 29, 2006).

Additional details regarding the biology, distribution, and life history requirements of steelhead and other affected species within the action area can be found in previous NMFS status reviews (see References) as well as salmonid stock inventories/maps for Puget Sound available online at http://wdfw.wa.gov/fish/sasi/, and fishing regulations available at http://wdfw.wa.gov/fishcorn.htm. If Puget Sound steelhead are listed as a threatened species under the ESA, some provisions are automatically invoked (e.g., section 7's consultation requirements for Federal actions/authorizations, access to section 10 authorizations, etc.) while

others require additional additional rulemaking (e.g., protective regulations and critical habitat designation under section 4).

Table 3-1. Fish Species Within the Action Area.

Species	Description	Endangered Species Act (ESA) Status
Steelhead	The Puget Sound steelhead Distinct Population Segment (DPS) includes all naturally spawned anadromous winter-run and summer-run *O. mykiss* populations, in streams in the river basins of the Strait of Juan de Fuca, Puget Sound, and Hood Canal, Washington, bounded to the west by the Elwha River (inclusive) and to the north by the Nooksack River and Dakota Creek (inclusive). Hatchery steelhead are also distributed throughout the range of this DPS and two of these hatchery stocks are proposed for listing as part of the DPS.	Proposed Threatened (71 FR 15666, March 29, 2006)
Resident Rainbow Trout	*O. mykiss* less than 20 inches in length are considered resident rainbow trout (WDFW 2006). Resident *O. mykiss* are rare in rivers west of the Cascade Mountains and it may be uncommon for the two life forms to co-occur. However, the 2005 NMFS steelhead status review also noted that resident *O. mykiss* are probably associated with many, if not most, of the steelhead populations in the Puget Sound DPS (NMFS, 2005b). There is very little information available regarding the distribution and abundance of the resident form within the range of this steelhead DPS and it is unclear to what degree resident fish contribute to or are affected by steelhead population dynamics and productivity.	Not Listed (*Note: it is very difficult to distinguish between resident and anadromous forms, especially juveniles, where they co-occur*)
Chinook Salmon	The Puget Sound Chinook salmon Evolutionarily Significant Unit (ESU) includes all runs of Chinook salmon within Puget Sound, from the Elwha River on the Olympic Peninsula to the North Fork Nooksack River, as well as five hatchery stocks.	Threatened (64 FR 14308, March 24, 1999)
Chum Salmon	There are two chum salmon ESUs within the action area: (1) a Hood Canal summer-run chum ESU that includes summer-run chum salmon populations (including several hatchery stocks) in Hood Canal tributaries as well as populations in Olympic Peninsula river between Hood Canal and Dungeness Bay; and (2) a Puget Sound/Strait of Georgia chum ESU that includes all other chum salmon populations in Puget Sound as far west as the Elwha River.	Hood Canal Summer-run ESU = Threatened (64 FR 14570, March 25, 1999) Puget Sound/Strait of Georgia ESU = Not Warranted (63 FR 11774, March 10, 1998)
Coho Salmon	The Puget Sound/Strait of Georgia coho salmon ESU includes all naturally spawned populations of coho from drainages of Puget Sound and Hood Canal, the eastern Olympic Peninsula (east of Salt Creek) and the Strait of Georgia from the eastern side of Vancouver Island and the British Columbia mainland (north to and including the Campbell and Powell Rivers), excluding the upper Fraser River above Hope.	Species of Concern (69 FR 19975, April 15, 2004)
Pink Salmon	There are two pink salmon ESUs within the action area: (1) an even-year pink ESU whose geographic boundaries are unclear, but at a minimum includes all even-year pink salmon populations in the Snohomish River, Washington (and possibly even-year	ESA listing Not Warranted for both ESUs (60 FR

Species	Description	Endangered Species Act (ESA) Status
	populations in British Columbia); and (2) an odd-year pink ESU that includes all odd-year pink salmon populations in Puget Sound and the Strait of Juan de Fuca, Washington, as far west as the Dungeness River (or the Elwha River, if that population is not already extinct) and in southern British Columbia (including the Fraser River and eastern Vancouver Island) as far north as Johnstone Strait.	51928, October 4, 1995)
Sockeye Salmon	Most known sockeye salmon populations are associated with lakes. However, small groups of sockeye are occasionally observed spawning in Puget Sound river systems that do not have suitable lakes, e.g., the North and South Forks of the Nooksack River, the lower Samish River, the upper Skagit River near Newhalem, the upper Sauk River, the North Fork Stillaguamish River, the Wallace River (a Skykomish tributary), the Green River, the Skokomish River, and the Dungeness River. NMFS has identified a Baker River sockeye salmon ESU that includes sockeye that return to spawn in the Baker River.	ESA listing Not Warranted for the Baker River ESU (64 FR 14528, March 25, 1999)
Bull Trout/Dolly Varden	The Coastal-Puget Sound bull trout DPS includes all bull trout in Pacific coast drainages within the coterminous United States north of the Columbia River in Washington. This DPS is unique because it is thought to contain the only anadromous forms of bull trout in the coterminous United States. Bull trout in this DPS often co-occur with Dolly Varden, a species that is nearly identical in appearance. Both species are managed by WDFW together as "native char."	Threatened (64 FR 58909, November 1, 1999)
Cutthroat Trout	Resident and anadromous cutthroat trout occur throughout the action area and have substantial overlap with Puget Sound steelhead. No DPS(s) have been identified within this area, however WDFW has identified 15 stocks or stock complexes in Puget Sound drainages (WDFW 2000).	Not Listed (nearly all stocks are of "unknown" status)

3.1.2 Fish Habitat

Physical habitats occupied by steelhead within the action area include thousands of stream miles as well as extensive nearshore and marine areas of Puget Sound (see Figure 1-1). Many of these habitats are shared with other ESA-listed species (see Table 3-1), however, steelhead do occupy a number of streams or tributaries in the action area that do not presently have ESA-listed species (see Figure 3-1). An array of other state and Federal laws currently affect the way that salmonid habitats are managed, including, but not limited to: *Washington* – Aquatic Lands Act, Floodplain Management Act, Salmon Recovery Act, and Shoreline Management Act; *Federal* - Clean Water Act and Magnuson-Stevens Fishery Conservation and Management Act. Tribes in the action area also manage salmonid habitat on tribal lands. Where and how a particular law applies varies considerably and depends on the type of activity, location, land owner/manager, and time of year. Habitat management issues for steelhead are

similar to those for other salmonids. Regardless of whether or not protective regulations have been issued for a listed species, habitats occupied by listed species benefit from ESA provisions vis-à-vis section 7 consultations and section 10 habitat conservation plans (HCPs)[5]. In September 2005, ESA critical habitat was designated for Puget Sound Chinook salmon and bull trout and Hood Canal summer-run chum salmon (70 FR 52630, September 2, 2005; 70 FR 56212, September 26, 2005); many of the areas designated overlap with areas occupied by Puget Sound steelhead. Section 7(a)(2) of the ESA includes a requirement that each Federal agency shall ensure that any action authorized, funded or carried out by such agency is not likely to result in the destruction or adverse modification of critical habitat.

Steelhead streams traverse a patchwork of private, state, tribal, and federal lands and a variety of land/water management activities can harm steelhead and their habitat. Spence *et al.* (1996) provide an exhaustive review of habitat-related impacts on salmonids in general, and the following excerpt taken from the WDFW coastal cutthroat inventory for the Samish River (WDFW 2000) is typical of the variety of localized habitat impacts affecting steelhead and other salmonids throughout Puget Sound:

"Livestock grazing and agricultural practices that remove streamside vegetation and increase siltation limit spawning areas and production. Water withdrawals for irrigation have reduced stream flows, increased stream temperatures, concentrated pollutants and resulted in fish kills. Logging practices have also altered stream flows, increased siltation of spawning beds, removed shading and increased stream temperatures, and increased rain-on-snow events causing landslides. Road culverts that are impassible to juvenile and adult anadromous cutthroat significantly reduce the river system's fish production capability by blocking access to spawning and rearing habitat. Diking of the river's shoreline has reduced fish-rearing habitat, streamside vegetation, and altered pools and riffles by confining the river channel."

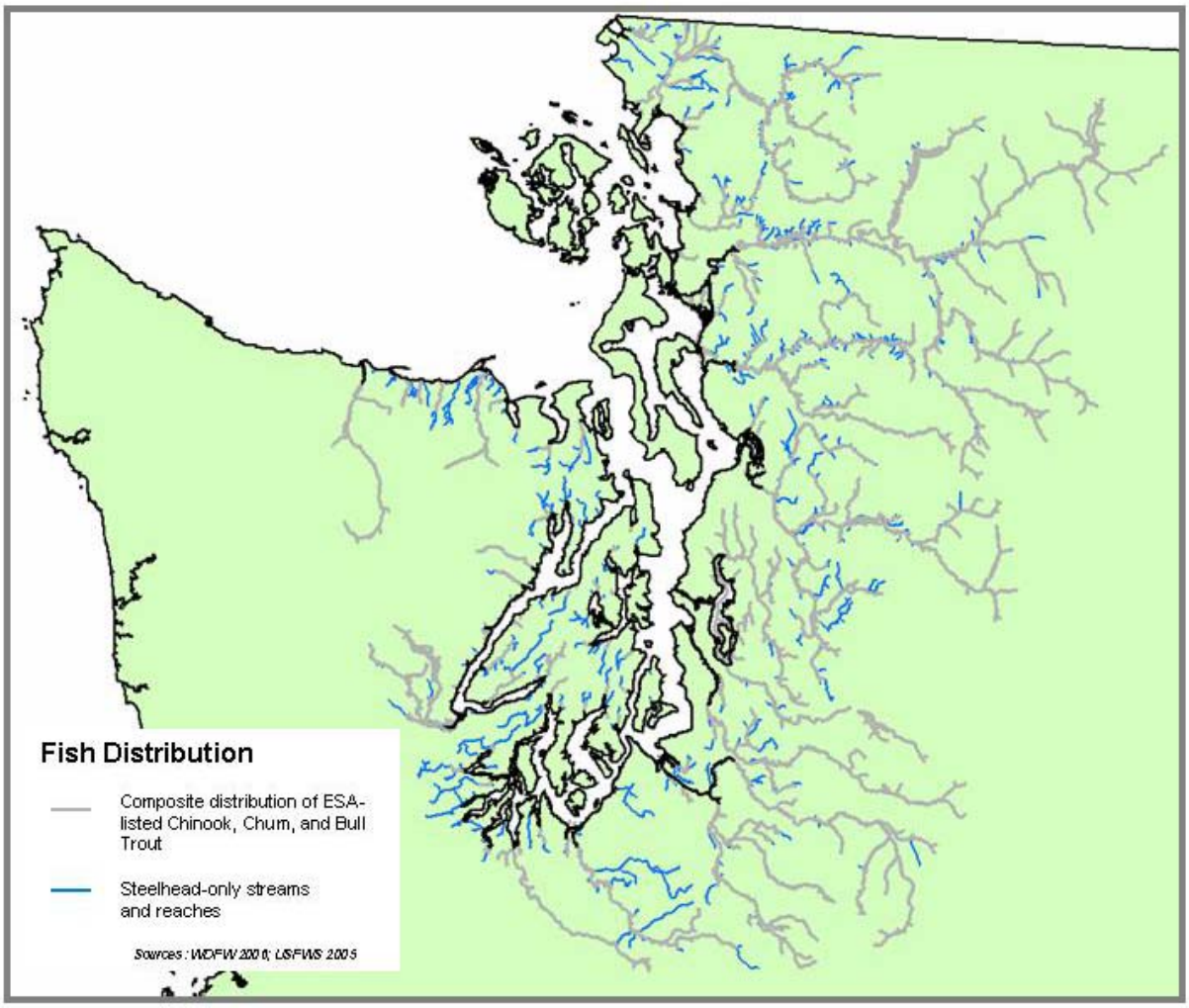
When NMFS proposed to list the Puget Sound DPS as a threatened species, the agency expressed concerns regarding dams and large numbers of other man-made impassable barriers (e.g., culverts) that block accessibility to habitat and impede connectivity among populations. Additionally, the agency noted that many upper tributaries in the Puget Sound region have been affected by poor forestry practices, while many of the lower reaches of rivers and their tributaries have been altered by agricultural and urban development. Urbanization has caused direct loss of riparian vegetation and soils, significantly altered hydrologic and erosional rates and processes (e.g., by creating impermeable surfaces such as roads, buildings, parking lots, sidewalks etc.),

[5] Active HCPs within the action area include: (1) City of Seattle - Seattle Public Utilities; (2) City of Tacoma - Tacoma Public Utilities; (3) WA Dept of Natural Resources - West of the Cascade Mountains; (4) WA State Forest Practices (Federal Assurances); (5) Green Diamond Timber , Shelton, WA Timberlands; and (6) Plum Creek Timber- Central Cascades.

and polluted waterways with stormwater and point-source discharges. The agency concluded that "the continued destruction and modification of steelhead habitat is the principal factor limiting the viability of the Puget Sound steelhead DPS into the foreseeable future" and "although there have been efforts to improve habitat conditions across the range of the Puget Sound steelhead DPS, land-use regulations across its range do not adequately address continued threats from habitat degradation and modification."

Harvest activities can also affect habitat, although they are relatively less harmful than the impacts referenced above. For example, the Puget Sound Chinook Harvest Resource Management Plan EIS (NMFS 2004) notes that the effects of hook-and-line angling (the typical technique used when fishing for steelhead) generally results in debris from lost lures/weights/terminal tackle, trampling of stream banks and substrata (including salmon/steelhead redds), and increased bank erosion in areas with heavy power boat use.

Figure 3-1. Distribution of Puget Sound steelhead relative to distribution of ESA-listed Puget Sound Chinook, Hood Canal summer-run chum, and bull trout.



3.2 SOCIOECONOMICS, RECREATION AND FISHING

Steelhead are considered a gamefish in Washington state, and in Puget Sound are primarily harvested in recreational fisheries. In 1969 the Washington Legislature adopted the steelhead as the state fish, underscoring the species' significant recreational and economic benefits to the state's residents. In addition, the resident life form (rainbow trout) is also a popular gamefish and the two forms co-occur in some drainages. Most of the nearly 4 million people – more than 67 percent of the state's residents – live and work near the shores of Puget Sound and in the alluvial valleys of major rivers supporting steelhead.

Counties in the action area (Figure 3-2) generate substantial industrial output, totaling $249.8 billion and 2.6 million jobs in 2000 and accounting for more than two-thirds of the statewide totals.[6] South Puget Sound accounts for the vast majority of employment in the action area (nearly 80 percent of jobs in the action area), and the leading major employment sector was the services sector, generating 31.4 percent of all jobs. Within the employment sectors potentially affected by the Proposed Action or alternatives, key employment sectors include the eating and drinking places sector, producing 5.3 percent of total jobs within the action area, and the miscellaneous retail sector, generating 3.9 percent of jobs. The action area generated $153.4 billion in income in 2000, with the services, finance/insurance/real estate, and government sectors producing the majority of the income. Income generated within the action area accounted for 77.2 percent of statewide income. Miscellaneous retail and eating and drinking places together generated 3.8 percent of total income within the action area.

The WDFW recently completed an economic analysis of steelhead recreational harvest in Washington State (WDFW 2006). They estimated that each year anglers spent nearly 2.5 million angler days and $166 million dollars to fish for steelhead and that the economic output totaled $1,898 dollars per steelhead caught. In the action area this output translates into more than $29 million dollars per year, most of which ($19.5 million) is associated with the winter steelhead fishery. This fishery is somewhat unique in that it is one of the only winter-time fisheries available to salmonid anglers.

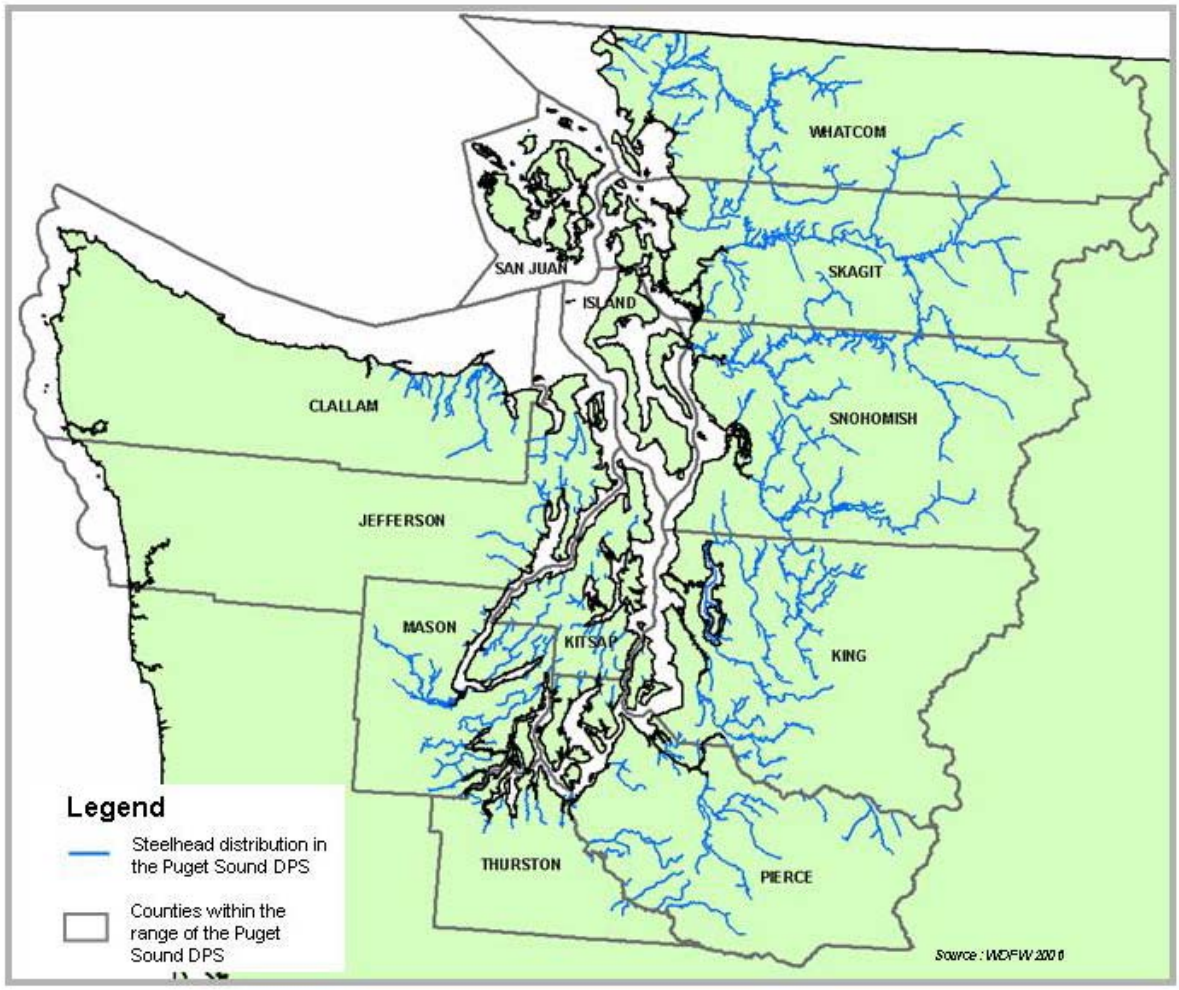
There are 18 Indian tribes located in Washington State with adjudicated fishing rights in Puget Sound or that are federally-recognized and demonstrate historic linkages with fisheries. These tribes share co-management responsibility for Puget Sound salmon and steelhead. Steelhead continue to provide important ceremonial and subsistence fisheries to many tribes (see section 3.3, FEDERAL TREATY AND TRUST RESPONSIBILITIES), however the

[6] The action area encompasses the same 12 counties addressed in the recent EIS and economic analysis for the Puget Sound Chinook Harvest Resource Management Plan (NMFS 2004). Therefore this EIS serves as a relevant and primary source for socioeconomic information pertaining to Puget Sound steelhead.

commercial value of tribally-caught steelhead is very minor at present due to the species' significant decline in Puget Sound.

In addition to the value that salmon and steelhead resources have to anglers, tribes, and the local and regional economy, these species have value to persons that do not directly use or consume them. These values--often difficult to quantify--are typically referred to as non-use or passive use values. Avoiding extinction of endangered species has been recognized as a source of passive use values (Meyer, 1974; Randall and Stoll, 1983; Stoll and Johnson, 1984, as cited in NMFS, 2004). Existence values are defined as the benefit received from simply knowing the resource exists even if no use is made of it. Healthy stocks of Puget Sound steelhead clearly fit into this definition.

Figure 3-2. Distribution of the Puget Sound steelhead in those Washington counties within the species' range.



3.3 FEDERAL TREATY AND TRUST RESPONSIBILITIES

There are 16 Indian tribes located in Washington State with adjudicated fishing rights in Puget Sound (Figure 3-3), and two additional tribes (Samish and Snoqualmie) that are federally-recognized and demonstrate historic linkages with fisheries. These tribes share co-management responsibility over steelhead with WDFW. Therefore, steelhead regulations described in this EA could potentially affect fishing rights guaranteed by treaties and recognized in U.S. v. Washington (commonly known as the Boldt decision) within the action area.

American Indians have occupied the action area for more than 12,000 years, but in the last two centuries traditional tribal cultures and land uses have undergone significant displacement. The steady growth of Euroamerican populations has caused conflicts over resource use and availability, as well as pressures to change Indian cultures. The competition and conflict between native and Euroamerican people in the 1800s resulted in a treaty-making period between Tribes and the United States government through the mid-to late-nineteenth century. The Puget Sound Chinook Harvest Resource Management Plan EIS (NMFS 2004) includes a robust history of federal-tribal relations in Puget Sound, the treaties defining that relationship, and the longstanding cultural linkages the tribes have with Puget Sound salmon and steelhead. That document concludes:

> "Salmon [including steelhead] are of economic importance to Indian people, and the species embody cultural, ceremonial, and social dimensions of their lives to the degree that it is a significant symbol of Indian and tribal identity. Tribal identity is realized and expressed in the many daily acts in which they engage. For the Indian people within the Puget Sound Action Area, many of those acts involve or include salmon. Tribal people have a strong present connection with salmon, and share a passionate concern for the future of salmon in the marine waters, rivers, lakes, and streams in the action area."

Specific treaty fisheries for steelhead planned for 2006/2007 include: Dungeness Bay and River net, Elwha River, Eastern and Western Strait of Juan de Fuca, Bellingham Bay net, Nooksack River net, Skagit Bay and River net, Stillaguamish/Snohomish Terminal Area 8 net, Duwamish/Green River net, Puyallup River net, White River net, and Port Gamble (WDFW and Northwest Indian Fisheries Commission 2006). In addition to these fisheries, individual treaty tribes may conduct additional ceremonial and subsistence fisheries.

3.4 ENVIRONMENTAL JUSTICE

Executive Order 12898, signed February 11, 1994, requires each federal agency to do the following:

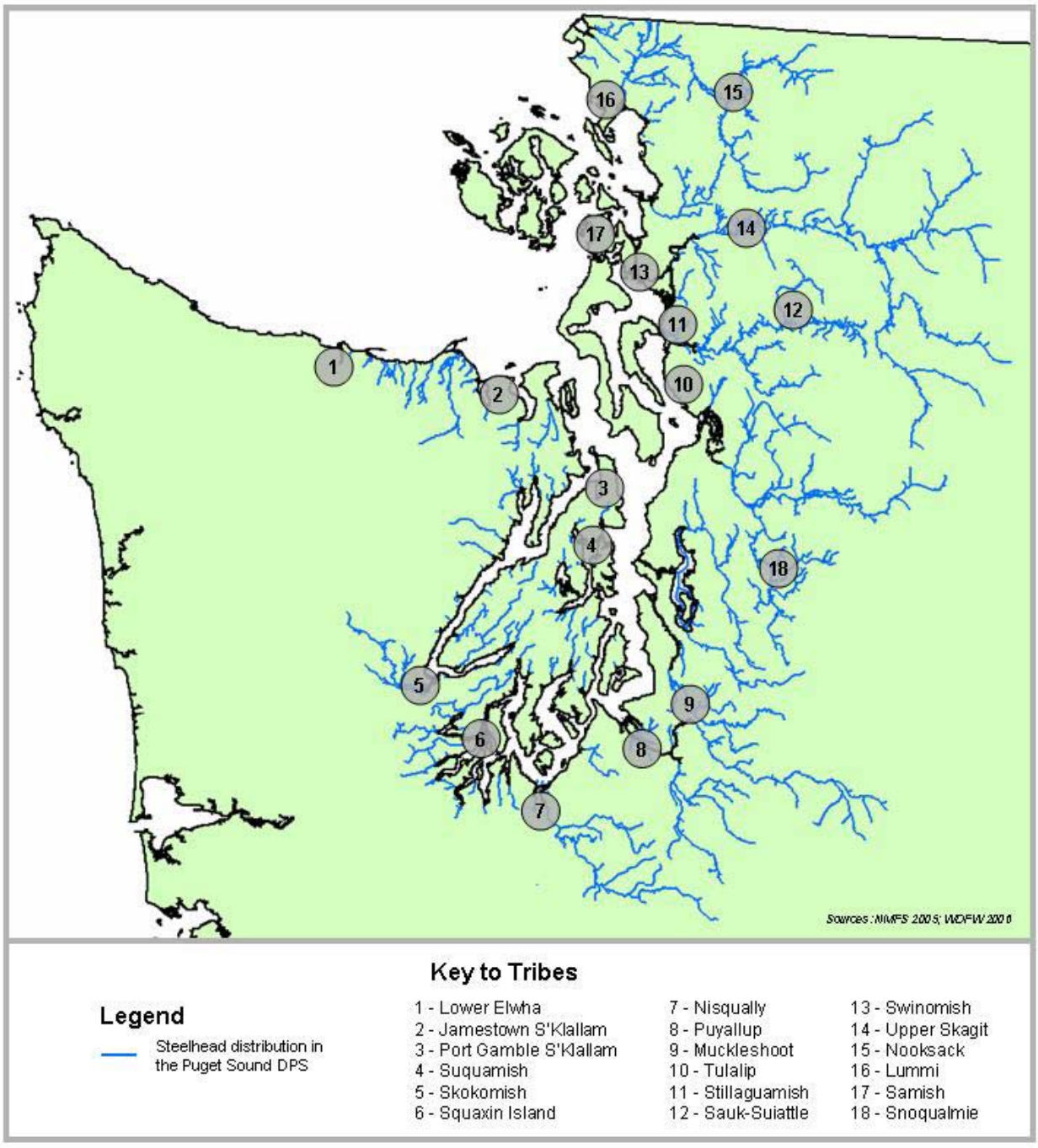
> ". . . make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations"

The U.S. Environmental Protection Agency, working with the Enforcement Subcommittee of the National Environmental Justice Advisory Council has developed technical guidance for conducting environmental justice assessments, in order to achieve consistency between analyses. Such analyses are intended to determine potential human health or environmental effects that could have significant and disproportionate adverse effects on low-income and/or minority populations potentially impacted by proposed federal actions. The Environmental Justice analysis should also determine whether such populations or communities have been sufficiently involved in the decision making process.

An Environmental Justice "Area of Concern" is defined as a target area that has been demonstrated to experience disproportionate effects and has a significant minority or low-income population relative to an appropriate reference area. A *Potential* Environmental Justice Area of Concern is a target area that contains a significant minority and/or low-income population, but the existence of disproportionate effects has not yet been shown. For this EA, the reference area is the state of Washington and the target area is defined by the counties that border Puget Sound and the Strait of Juan de Fuca, and is synonymous with the Puget Sound Action Area.

The Environmental Justice analysis in this EA relied on data and results contained in the Puget Sound Chinook Harvest Resource Management Plan EIS (NMFS 2004). Those results indicate that none of the 12 counties in the target area exhibit poverty levels equal to or greater than an EPA-recommended threshold of 20 percent. Two of the counties—King and Pierce—exceed the state minority criteria of 15.72 percent of the county population. Asians and Black/African Americans were the principal minority groups in these two counties. However, additional inquiries made during the development of the EIS indicated that 91 percent of resident sport anglers in the State of Washington are white and that there were no known substantial aggregations of minority fishermen, with the exception of Indians. Although Indians comprise only 1 percent of the population in both King and Pierce counties, as noted above under "Federal Treaty and Trust Responsibilities," many of the tribes throughout the action area share a longstanding history of a culture and subsistence economy based on salmon and steelhead. The decline of these species has altered traditional tribal economies, and reduced wealth, health, and well-being.

Figure 3-3. Distribution of the Puget Sound steelhead relative to native American tribes within the species' range.



4. ENVIRONMENTAL CONSEQUENCES

This section addresses the likely consequences of each alternative on the resources identified in the Affected Environment section. A related EA pertaining to ESA protective regulations for Puget Sound Chinook and Hood Canal summer-run chum salmon (and other DPSs) was prepared in June 2005 (NMFS, 2005a). NMFS determined that implementing 4(d) rules for these species would not significantly affect the quality of the human environment. The analyses and determinations in that EA and Finding of No Significant Impact are incorporated by reference herein.

4.1 ALTERNATIVE 1 (NO ACTION)

This alternative would reflect a finding by NMFS that no protective regulations are needed for the conservation of the Puget Sound steelhead DPS. NMFS has not proposed this alternative because it has determined that existing protections do not as yet provide sufficient certainty of implementation and effectiveness to substantially reduce the extinction risk for this DPS.

4.1.1 Fish

Under the No Action Alternative there would be no ESA protective regulations for the Puget Sound steelhead DPS. Without these regulations, the DPS would be vulnerable to harm and continued decline from a range of actions, in particular from harvest[7] and hatchery operations. No substantial effects on other fish species are expected to occur under a No Action Alternative, although ecological interactions related to hatchery steelhead such as competition and predation may continue to be issues of concern for some species.

4.1.2 Fish Habitat

Habitats supporting both steelhead and other ESA-listed species would not be substantially affected by the No Action Alternative because such habitats already receive agency review and protections under section 7 of the ESA. Habitats supporting *only* steelhead could deteriorate or be difficult to improve in the absence of ESA protective regulations for Puget Sound steelhead. Such habitats are primarily small tributaries of larger river systems (see Figure 3-1). Furthermore, without the conservation-based inducements provided by some of the 4(d) limits (e.g., the routine road maintenance limit and the municipal, residential, commercial and

[7] Current state harvest regulations allow anglers to fish for steelhead but prohibit them from keeping unmarked (wild) steelhead in nearly all streams in the action area (see Appendix B). Therefore, angling-related impacts under

industrial development and redevelopment limit), some habitats may not see much if any improvement in the way that they are managed.

4.1.3 Socioeconomics, Recreation and Fishing

There could be some positive short-term benefits to fishing-related industries and to those communities that support fishing under the no action alternative since steelhead would not have take prohibitions under the ESA and therefore could continue to be targeted in fisheries. However, in the long term, steelhead populations would likely continue to decline in abundance, productivity, spatial structure, and diversity resulting in permanent and substantial harm to the fishing industry. Impacts on localized fishing industries (i.e., towns and stores adjacent to popular fishing sites) could include commercial losses and tourism- and angler-related losses from fishing licenses and supporting services such as guides, motels, restaurants, and retail sporting goods stores. Such impacts may be most evident near streams with the largest runs of steelhead, including the Skagit, Snohomish, Skykomish, and Green rivers. Although South Puget Sound accounts for the vast majority of employment in the action area, localized economic impacts may not be as significant here relative to areas to the north where the bulk of extant steelhead production occurs.

In addition to the impacts on anglers and the local and regional economy, the expected long term decline in steelhead under this alternative would amplify the level of concern among people that place a high existence/passive use value on steelhead.

4.1.4 Federal Treaty and Trust Responsibilities

This alternative would have no immediate effect on Federal treaty and trust responsibilities because it would maintain the status quo, especially with respect to steelhead harvest by tribal and non-tribal fishers. However, Puget Sound steelhead are expected to continue their decline without ESA protective regulations, which in turn would result in economic impacts on tribal communities in the action area similar to those on fishing-dependent communities as described above. Diminishing runs of steelhead will continue to have an adverse cultural effect on the 18 affected Puget Sound tribes, in particular their sense of place and their ability to pursue a traditional food source and livelihood. Furthermore, it is likely that federal trust responsibilities to Tribes would be compromised, with the concomitant strain on inter-governmental relations, if the DPS continues to decline and fish are not available for harvest.

4.1.5 Environmental Justice

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the No Action Alternative would be continued harvest of hatchery fish and incidental mortality of wild fish that die after being caught and released.

In the long term, minority and low income communities would not be disproportionately impacted under the No Action Alternative relative to other communities since the adverse effect of diminished steelhead runs would be equally realized by all economic sectors dependent on this resource. Short-term adverse effects would likely be minimal since the No Action alternative maintains the current management regime for this species. As described in section 3.4 (Environmental Justice), Indians are the only substantial aggregation of minority fishermen in the action area and expected impacts on them are those described above in section 4.1.4 (Federal Treaty and Trust Responsibilities).

4.2 ALTERNATIVE 2 (PROPOSED ACTION)

Under this alternative NMFS would promulgate ESA 4(d) protections for Puget Sound steelhead that are identical to those issued in 2005 (located in agency regulations at 50 CFR 223.203; see subsection 1.2. Background of Regulatory Authorities).

4.2.1 Fish

Under this alternative the Puget Sound steelhead DPS would receive ESA protective regulations that are consistent with all other threatened DPSs of salmon and steelhead, including co-occurring Puget Sound Chinook and Hood Canal summer-run chum salmon. Promulgating a single set of protective regulations would decrease public confusion, promote consistent management approaches, and aid steelhead by encouraging stakeholders to pursue conservation-oriented limits under the 4(d) rule. For example, the 4(d) limit for scientific research activities (50 CFR 223.203(b)(7)) has substantially streamlined the research permit application and review process. Where it applies it has allowed managers and researchers to authorize dozens of research projects in the same timeframe once taken to process and permit one or two projects under other methods. Furthermore, because data for all research projects are tracked and stored in a centralized database, it provides managers the ability to more readily evaluate the cumulative impact of research related activities and thereby utilize this information to assist with protections for listed fish to an even greater degree than was possible before the advent of the 2000 4(d) rule. Steelhead and other fish species would benefit under this alternative if it results in changes to harvest and hatchery management (via the 4(d) limit pertaining to hatchery and genetic management plans (HGMP)) that address conservation concerns for this DPS. For example, exploring alternatives to the widespread use of non-local hatchery steelhead for broodstock would address adverse genetic impacts on wild steelhead. Predation, competition, and incidental harvest impacts on other fish species could also be addressed during the development of HGMPs (as well as fishery management and evaluation plans under a separate 4(d) limit).

4.2.2 Fish Habitat

As under Alternative 1, habitats where steelhead co-occur with other ESA-listed species would not be substantially affected by the Proposed Action Alternative because such habitats already receive agency review and protections under the ESA. However, in some areas the habitats supporting other ESA-listed species are downstream of areas that only steelhead inhabit. In contrast to Alternative 1, under the proposed action these steelhead-only stream reaches would receive protection via the prohibitions on take afforded by ESA 4(d) regulations. Likewise, those steelhead-only streams that flow directly into Puget Sound would also likely benefit from the proposed action to issue 4(d) protective regulations for Puget Sound steelhead. In addition, some of the 4(d) limits (e.g., Limit 10 - routine road maintenance, and Limit 12 - municipal, residential, commercial and industrial development and re-development) could be applied to steelhead-related actions, thereby encouraging the development of better land/water management practices that benefit steelhead wherever they are found in the action area.

4.2.3 Socioeconomics, Recreation and Fishing

As with Alternative 1, in the short term there would be few angling-related economic impacts resulting from promulgating existing ESA 4(d) protective regulations for Puget Sound steelhead because harvest regulations would likely remain the same, i.e., the harvest of fin-clipped hatchery fish would still be allowed but non-clipped fish would need to be released. However, the economic impacts could increase in the long term if there are changes in steelhead harvest and hatchery regimes that address conservation concerns for this DPS, in particular the widespread use of non-local hatchery fish for broodstock. In contrast to Alternative 1, these long-term impacts reflect changes in management rather than a decline in the species' biological status. If such management changes restrict fishing opportunities then impacts on localized fishing industries could include commercial losses and tourism-related losses from fishing licenses and supporting services such as guides, motels, and sporting goods stores. Such impacts may be most evident near streams with the largest runs of steelhead, including the Skagit, Snohomish, Skykomish, and Green rivers. Although South Puget Sound accounts for the vast majority of employment in the action area, localized economic impacts may not be as significant here relative to areas to the north where the bulk of extant steelhead production occurs.

Also, as in the case of Alternative 1, the expected long term decline in steelhead under Alternative 2 would amplify the level of concern among people that place a high existence/passive use value on steelhead.

4.2.4 Federal Treaty and Trust Responsibilities

Economic impacts on tribal communities in the action area would be similar to those on fishing-dependent communities as described above. However, in contrast to Alternative 1, the 18 affected Indian tribes may perceive changes in harvest or hatchery management regimes that diminish tribal harvest opportunities as conflicting with treaty rights and federal trust responsibilities, at least in the short term. Potential treaty and trust conflicts would likely moderate once protective regulations and other conservation measures improve the status of the species. Moreover, Limit 14 is specifically tailored to tribal resource management plans that contribute to salmonid conservation. Under this limit, a tribe could conduct tribal trust resource management actions that may take threatened steelhead, without the risk of violating take prohibitions adopted under ESA section 4(d). This limit on take prohibitions would encompass a variety of types of tribal plans, including but not limited to, plans that address fishery harvest, artificial propagation, research, or water or land management.

In contrast to the continued decline in steelhead runs projected under Alternative 1, the expected protections and improvements under Alternative 2 would have a positive cultural effect on Puget Sound Tribes, enhancing their sense of place and their ability to pursue a traditional food source and livelihood. Furthermore, federal trust responsibilities to Tribes would be more attainable and inter-governmental relations improved once steelhead are more abundant and made available for harvest (e.g., via approved tribal resource management plans under Limit 14).

4.2.5 Environmental Justice

As with Alternative 1, Alternative 2 would not disproportionately impact minority and low income communities relative to other communities since the overall adverse effect of diminished steelhead runs would be equally realized by all economic sectors dependent on this resource. Further, there is no information to suggest that imposing ESA take prohibitions on steelhead would disproportionately affect minority or low income communities aside from the impacts on tribal fishers (i.e., the only substantial aggregation of minority fishermen in the action area) described above in section 4.1.4 - Federal Treaty and Trust Responsibilities.

4.3 ALTERNATIVE 3

Under this alternative NMFS would promulgate a 4(d) rule that applies all ESA section 9(a) prohibitions to the Puget Sound steelhead DPS with no limitations.

4.3.1 Fish

Under this alternative the Puget Sound steelhead DPS would receive ESA protections equivalent to those of an endangered species. Unlike Alternative 1, hatchery steelhead stocks included in the final listing determination would not be available for commercial, recreational, or tribal fisheries. Without harvest, naturally spawning hatchery steelhead would displace, compete with, or interbreed with wild fish. The adverse consequences on naturally spawned populations of hatchery steelhead that stray and spawn in the wild have been described in scientific literature (National Research Council 1996; Brannon *et al.* 1999; Hatchery Scientific Review Group 2000; Independent Multidisciplinary Science Team 2001; Independent Scientific Advisory Board 2001, 2003).

In some locations, trapping or handling facilities allow managers to control access of hatchery-origin fish to natural spawning areas, but many natural spawning areas are not located above such facilities, and access by hatchery-origin fish is unrestricted. In addition, without adequate harvest, the number of fish returning to a given hatchery would likely exceed intended production levels and facility capacity, necessitating a restructuring of hatchery program goals and/or design at substantial financial cost, or listed hatchery fish may need to be destroyed.

Similar to Alternative 1, no substantial effects on other fish species are expected to occur under this alternative, although it is plausible that changes in hatchery or harvest management (prompted by take prohibitions under ESA section 9) could benefit steelhead and other species by reducing ecological interactions such as predation and competition (e.g., reductions in hatchery steelhead smolt releases). The incidental harvest of other species may also decline if harvest restrictions for steelhead decrease angler effort and the likelihood of catching/harming co-occurring species. This decline in harvest would not occur under Alternatives 1 or 2.

4.3.2 Fish Habitat

As under Alternative 1, habitats where steelhead co-occur with other ESA-listed species would not be substantially affected by this alternative because such habitats already receive agency review and protections under the ESA. However, in some areas the habitats supporting other ESA-listed species are downstream of areas that only steelhead inhabit. In contrast to Alternative 1, these steelhead-only stream reaches would receive protection via the prohibitions on take afforded under this alternative. Likewise, those steelhead-only streams that flow directly into Puget Sound would also likely benefit from the protective regulations considered under this alternative for Puget Sound steelhead. However, without the conservation-based inducements provided under Alternative 2 (e.g., 4(d) limits for routine road maintenance limit and the municipal, residential, commercial and industrial development and redevelopment limit) some habitats may not see much if any improvement in the way that they are managed.

4.3.3 Socioeconomics, Recreation and Fishing

Substantial economic impacts would likely result from this alternative, as compared to Alternatives 1 and 2, because listed hatchery and wild steelhead would be protected from take resulting from angler harvest. Impacts could also encompass potential harvest restrictions on co-occurring resident rainbow trout given the similarity of appearance with steelhead (see Table 3-1). In the short term, impacts on anglers, fishing communities and the fishing industry would likely be much more severe compared to Alternatives 1 and 2 because take prohibitions would apply more broadly and with greater constraints on fishery management options.

4.3.4 Federal Treaty and Trust Responsibilities

Similar to Alternative 1, the 18 tribes in the action area would not have access to the 4(d) limit pertaining to tribal resource management plans and would instead need to consider acquiring take authorizations via other provisions of the ESA (e.g., Section 10). Economic impacts on tribal communities would be similar to those on fishing-dependent communities as described above. However, cultural impacts—in particular their sense of place and their ability to pursue a traditional food source and livelihood— under this alternative could be substantially greater than under Alternatives 1 and 2 if tribal members are unable to pursue steelhead harvest. Also, changes in harvest or hatchery management regimes that diminish tribal harvest opportunities could be perceived by tribes as conflicting with treaty and federal trust responsibilities, at least in the short term. Potential treaty/trust conflicts would likely moderate once protective regulations and other conservation measures improve the species' status.

4.3.5 Environmental Justice

As with Alternatives 1 and 2, minority and low income communities would not be disproportionately impacted under this alternative relative to other communities since the adverse effect of diminished steelhead runs would be equally realized by all economic sectors dependent on this resource. Further, there is no information to suggest that imposing ESA take prohibitions on steelhead would disproportionately affect minority or low income communities aside from the impacts on tribal fishers (i.e., the only substantial aggregation of minority fishermen in the action area) described above in section 4.1.4 - Federal Treaty and Trust Responsibilities. However, short term adverse effects could occur to low income communities that provide goods and services to steelhead fisheries if changes in harvest or hatchery management regimes place greater restrictions on angling for steelhead and resident rainbow trout (i.e., due to the similarity of appearance between the two forms – see Table 3-1).

4.4 CUMULATIVE EFFECTS

Other federal, tribal, and state actions are expected to occur that would affect the steelhead populations within the range of this DPS, including an array of management decisions related to fisheries, and land and water use. There are overarching policy and biological concerns as well as legal mandates for the recovery of listed salmonid populations in range of the DPS; at the same time there are social and cultural needs for sustainable fisheries and sustainable economic use of resources.

Numerous initiatives by state, federal, tribal, and private entities designed to restore imperiled salmonid populations are underway in Puget Sound. In January 2007, NMFS adopted a final ESA Recovery Plan (Plan) for Puget Sound Chinook salmon (Shared Strategy Development Committee, 2005). This Plan, prepared by the Shared Strategy[8] with a supplement by NMFS[9] (NMFS, 2005c), provides a roadmap for implementation of recovery actions in the Puget Sound Basin of Washington State. Although the Plan focuses on the recovery of threatened Puget Sound Chinook, it is reasonable to expect that its implementation, especially those Plan elements related to habitat protection, will also accrue benefits to other species including Puget Sound steelhead.

The cumulative impacts of NMFS' Proposed Action on steelhead and co-occurring species are expected to be minor because of reporting and monitoring requirements that would ensure compatibility with other fisheries conservation strategies. Within the range of this DPS, there are expected to be beneficial effects on the biological and human environments associated with the application of scientifically-based fishery management that promotes sustainable

[8] The Shared Strategy is a nonprofit organization founded in 1999 to coordinate recovery planning for Puget Sound salmonids. It includes representatives of federal, state, tribal, and local governments, business, agriculture and forestry industries, conservation and environmental groups, and local watershed planning groups. The Shared Strategy Plan is based on individual watershed recovery plans put together by groups and local governments in 14 watershed planning areas.

[9] The supplement is NMFS' assessment of the Shared Strategy Plan's relationship to ESA requirements for recovery plans and specifies recovery (de-listing) criteria for the Puget Sound Chinook ESU. The supplement also explains the agency's intent to use the Shared Strategy Plan to guide and prioritize federal recovery actions in the ESU and to ultimately adopt the Shared Strategy Plan as a final ESA recovery plan for the ESU.

resources. Conservative management is only one element of a large suite of regulations and environmental factors that may influence the overall health of listed salmonid populations and their habitat. Monitoring and adaptive management would help ensure that the Puget Sound steelhead DPS is adequately protected and would help counter-balance any potential adverse cumulative impacts.

5. REFERENCES

Federal Register Notices

71 FR 15677, March 29, 2006
71 FR 15666, March 29, 2006
70 FR 56212, September 26, 2005
70 FR 52630, September 2, 2005
70 FR 37160, June 28, 2005
69 FR 19975, April 15, 2004
67 FR 1116, January 9, 2002
65 FR 42485, July 10, 2000
65 FR 42422, July 10, 2000
64 FR 58909, November 1, 1999
64 FR 14570, March 25, 1999
64 FR 14528, March 25, 1999
64 FR 14308, March 24, 1999
63 FR 11774, March 10, 1998
62 FR 38479, July 18, 1997
61 FR 4722, February 7, 1996
60 FR 51928, October 4, 1995
56 FR 58612, November 20, 1991

NMFS ESA Status Reviews

The following agency status reviews relate to species addressed in this EA and are available for download as a PDF at http://www.nwr.noaa.gov/Publications/Biological-Status-Reviews/Salmon.cfm

2006 Status Update for Puget Sound Steelhead
2005 Status Update of All Federally Listed ESUs
1999 Status of Chinook, Chum, & Steelhead Hatchery Populations Identified in Final Listings
1999 Status Update of Columbia River and Hood Canal Summer-run Chum Salmon ESUs
1998 Status Review of Chinook Salmon from WA, ID, OR, & CA
1998 Status Update for Ozette Lake & Baker River Sockeye ESUs
1997 Status Review of Chum Salmon from WA, OR, & CA
1997 Status Review of Sockeye Salmon from WA & OR
1997 Status Review of West Coast Steelhead from WA, ID, OR, & CA
1996 Status Review of Pink Salmon from WA, OR, & CA
1995 Status Review of Coho Salmon from WA, OR, & CA

Reports

Brannon, E.L., K.P Currens, D. Goodman, J.A. Lichatowich, W.E. McConnaha, B.E. Riddell, and R.N. Williams. 1999. Review of Artificial Production of Anadromous and Resident Fish in the Columbia River Basin, Part I: A Scientific Basis for Columbia River Production Program, Northwest Power Planning Council, 139 pp.Hatchery Scientific Review Group. 2000. Scientific

framework for artificial propagation of salmon and steelhead. Puget Sound and Coastal Washington Hatchery Scientific Review Group. December 2000. Available on the Internet at: http://www.lltk.org/hatcheryreform.html#review

Independent Multidisciplinary Science Team. 2001. The scientific basis for artificial propagation in the recovery of wild anadromous salmonids in Oregon. Technical Report 2001-1 to the Oregon Plan for Salmon and Watersheds. Oregon Watershed Enhancement Board Office. Salem, Oregon. Available on the Internet at: http://www.fsl.orst.edu/imst/reports.html

Independent Scientific Advisory Board. 2003. Review of salmon and steelhead supplementation. ISAB 2003-03. June 4, 2003. Portland, Oregon. Available on the Internet at: http://www.nwcouncil.org/library/isab/isab2003-3.htm

National Marine Fisheries Service (NMFS). 2000. A Citizen's Guide to the 4(d) Rule for Threatened Salmon and Steelhead on the West Coast. Available online at http://www.nwr.noaa.gov/1salmon/salmesa/4ddocs/4dcg.pdf

NMFS. 2004. Puget Sound Chinook Harvest Resource Management Plan Final Environmental Impact Statement. Prepared by the National Marine Fisheries Service, Northwest Region, with assistance from the Puget Sound Treaty Tribes and Washington Department of Fish and Wildlife. December 2004. Available on the Internet at: http://www.nwr.noaa.gov/Salmon-Harvest-Hatcheries/Salmon-Fishery-Management/PS-Chinook-Harvest-Final-EIS.cfm

NMFS, 2005a. Final Environmental Assessment of Proposed Amendment to 4(d) Protective Regulations for Threatened Salmonid ESUs. Prepared by NOAA Fisheries, Northwest Region. June 2005. Available on the Internet at: http://www.nwr.noaa.gov/Publications/NEPA-Documents/salmon-4d-NEPA.cfm

NMFS, 2005b. Status Review Update for Puget Sound Steelhead. Prepared by the Puget Sound Steelhead Biological Review Team, National Marine Fisheries Service, Northwest Fisheries Science Center. July 26, 2005. Available on the Internet at: http://www.nwr.noaa.gov/Publications/Biological-Status-Reviews/Salmon.cfm

NMFS. 2005c. Final Supplement to the Shared Strategy's Puget Sound Salmon Recovery Plan, prepared by NMFS, Northwest Region, November 17, 2006. Available on the Internet at http://www.nwr.noaa.gov/Salmon-Recovery-Planning/Recovery-Domains/Puget-Sound/PS-Recovery-Plan.cfm

National Research Council. 1996. Upstream: salmon and society in the Pacific Northwest. National Academy Press, Washington, D.C.

Shared Strategy Development Committee. 2005. Puget Sound Salmon Recovery Plan, submitted by the Shared Strategy Development Committee. Available on the Internet at: http://www.nwr.noaa.gov/Salmon-Recovery-Planning/Recovery-Domains/Puget-Sound/PS-Recovery-Plan.cfm

Spence, B.C., G.A. Lomnicky, R.M. Hughes, and R.P. Novitzki. 1996. An ecosystem approach to salmonid conservation. TR-4501-96-6057. ManTech Environmental Research Services Corp., Corvallis, Oregon. Available from the National Marine Fisheries Service, 1201 NE Lloyd Blvd., Suite 1100, Portland, Oregon, 97232.

Washington Department of Fish and Wildlife (WDFW). 2006. *Oncorhynchus mykiss*: Assessment of Washington State's Anadromous Populations and Programs. Edited by J.B. Scott, Jr., and W.T. Gill. Public review draft dated July 21, 2006. Available on the Internet at: http://wdfw.wa.gov/fish/papers/steelhead/index.htm

WDFW and Northwest Indian Fisheries Commission. 2006. 2006-7 State/Tribal Agreed-to Fisheries Document (May 1, 2006 – April 30, 2007). Joint agency report dated April 10, 2006. Available on the Internet at: http://wdfw.wa.gov/fish/tribal/2005-06agreement.pdf

APPENDIX A - SUMMARY OF NMFS 4(D) LIMITS FOR THREATENED WEST COAST SALMON AND STEELHEAD (CODIFIED IN AGENCY REGULATIONS AT 50 CFR 223.203)

A.1 ESA SECTION 10 ACTIVITIES

This limit recognizes that those holding permits under section 10 of the ESA (or receiving other exemptions under the ESA) are free of the take prohibitions so long as they act in accordance with the permit or applicable law. Land management activities associated with a habitat conservation plan and scientific research are examples of activities for which a section 10 permit may be issued (NMFS 2000h).

A.2 ONGOING SCIENTIFIC RESEARCH

This limit provides a six-month "grace period" for ongoing scientific research projects that may affect threatened DPSs, provided an application for a research or enhancement permit reaches the Assistant Administrator for Fisheries, NOAA, within 60 days after publishing a final 4(d) rule. The take prohibitions will extend to these activities if the Assistant Administrator rejects an application as insufficient, if a permit is denied, or if six months have elapsed since the effective date of the final rule, whichever occurs earliest. It is in the interest of conservation not to disrupt ongoing research and conservation projects, some of which are of long duration. This limit on the take prohibitions ensures there will be no unnecessary disruption of those activities, yet provides NMFS with the ability to halt the activity if it will have unacceptable impacts on a listed DPS. This limit - originally promulgated in 2000 - has expired, and under the Proposed Action, NMFS proposes to amend it to exempt ongoing scientific research for up to 6 months (from publication of the final rule), provided an application reaches the Assistant Administrator for NOAA Fisheries within 60 days from publication of the final rule. Under the No Action alternative, this limit would remain expired, but would still appear in the agency's 4(d) regulations.

A.3 RESCUE AND SALVAGE ACTIONS

This limit relieves certain agency and official personnel (or their designees) from the take prohibitions when they are acting to aid an injured or stranded fish or salvage a dead fish for scientific study. Each agency acting under this limit is to report the numbers of fish handled and their status on an annual basis. This limit on the take prohibitions conserves the listed species by preserving life or furthering an understanding of species' biology

A.4 FISHERY MANAGEMENT

State fishery management programs that are specifically implemented to minimize impacts of recreational fisheries on listed species can be developed into fishery management and evaluation plans (FMEPs). FMEPs must include measures to minimize and adequately limit take of threatened salmonids,

such as allowing only marked fish of hatchery origin to be retained, permitting open fishing seasons only where and when hatchery fish dominate, providing sanctuary areas for naturally spawning salmonids, and regulating timing of other fisheries to minimize incidental take of juvenile salmonids. The FMEPs must also include monitoring of take of threatened salmonids, annual coordination with NMFS on the fishing regulations, and providing NMFS with access to all data and reports related to the program. NMFS believes that a fishery program with these characteristics will adequately protect threatened salmonids. Once NMFS deems that a Fishery Management and Evaluation Plan (FMEP) is protective of salmonids, NMFS provides a concurrence letter, specifying any monitoring and reporting requirements. Before finding any new or amended FMEP adequate, NMFS makes the plan available for public review and comment for a period of not less than 30 days.

A.5 ARTIFICIAL PROPAGATION

Hatchery salmonids are produced for conservation and harvest purposes, including recreational and tribal fisheries, usually as mitigation for lost spawning habitat upstream of impassable dams. For its salmonid artificial production programs to be free of take prohibitions, a state must develop a hatchery and genetic management plan (HGMP) and ensure adequate implementation of the activities described in the plan.

To ensure that broodstock collection and associated production are appropriate, NMFS has developed criteria for evaluating HGMPs. These criteria include strict limits on collecting broodstock based on whether the population functions at or above a viable population threshold. When a population is not function at or above this threshold, collection would be appropriate only if the intended goal of the collection program is strictly to enhance the propagation or survival of the listed DPS. Broodstock collection may also be appropriate in limited circumstances where the donor population is well above critical thresholds, although not yet viable, and collection will not appreciably slow the attainment of viable status.

An HGMP also must appropriately prioritize broodstock collection programs, demonstrate adequate existing fishery management programs and regulations, demonstrate adequate hatchery facilities, contain effective monitoring efforts, and include specific hatchery practice protocols aimed at conserving the genetic integrity of listed, naturally spawning salmonids.

A.6 JOINT TRIBAL/STATE PLANS DEVELOPED UNDER THE *UNITED STATES* V. *WASHINGTON* OR THE *UNITED STATES* V. *OREGON* SETTLEMENT PROCESSES

Non-tribal salmonid management in the Puget Sound and Columbia River areas is profoundly influenced by the fishing rights of numerous Indian tribes and must be responsive to the court proceedings that interpret and define those tribal rights. Various orders of the *United States* v. *Washington* court, such as the Puget Sound Salmon Management Plan (originally approved by the court in 1977; amended in *United*

States v. *Washington*, 626 F. Supp. 1405, 1527 (1985, W.D. Wash.)), mandate that many aspects of fishery management, including but not limited to harvest and artificial production actions, be jointly coordinated by the State of Washington and the Western Washington Treaty tribes. The State of Washington, affected tribes, other interests, and federal agencies are all working toward an integrated set of management strategies and strictures that respond to the biological, legal, and practical realities of salmon management in Puget Sound. Similar principles apply in the Columbia River basin where the States of Oregon, Washington, and Idaho and five treaty tribes work within the framework and jurisdiction of *United States* v. *Oregon*.

NMFS includes this limit on the take prohibitions to accommodate any resource management plan developed jointly by the States and the Tribes (joint plan) under the jurisdiction of *United States* v. *Washington* or *United States* v. *Oregon* for fishery management or artificial propagation activities. Such a plan would be developed and reviewed under the government-to-government processes outlined in the final 4(d) rule for tribal Resource Management Plans, and analyzed using the criteria of limit 4 or 5, as appropriate. Before any joint plan receives a limit on the take prohibitions, the Secretary must determine that it will not appreciably reduce the likelihood of the listed species' survival and recovery. The Secretary shall publish a notice in the *Federal Register* of any pending determination regarding a joint plan; the notice will include a discussion of the biological analysis underlying the determination, and invite public input on the advisability and adequacy of the Secretary's pending determination.

NMFS will evaluate joint plans on a regular basis to determine if they sufficiently protect and conserve the listed fish.

A.7 SCIENTIFIC RESEARCH

In carrying out their fishery management responsibilities, state fishery management agencies conduct or permit a wide range of scientific research and monitoring studies on various fisheries, including studies on threatened salmonids. In general, NMFS concluded that these activities are vital for improving the understanding of the status and risks facing threatened salmonids, and will provide critical information for assessing the effectiveness of current and future management practices. NMFS, therefore, does not find it necessary and advisable to prohibit take of threatened salmonids for scientific research and monitoring purposes, provided that: (1) research and monitoring involving directed take of threatened salmonids is conducted or supervised by personnel attached to the appropriate state agencies; (2) the agencies provide NMFS with a list of all research and monitoring activities involving threatened salmonids directed take planned for the coming year for NMFS' review and approval; (3) the agencies provide NMFS with the results of research and monitoring studies (including a report of the directed take resulting from these studies) directed at threatened salmonids; (4) the agencies provide NMFS annually with a list of all research and monitoring studies they permit that may incidentally take threatened salmonids during the coming year, and report the level of incidental take from the previous year's

research and monitoring activities for NMFS' review and approval; and (5) research and monitoring activities involving electrofishing in any body of water known to or suspected to contain threatened salmonids should comply with "Guidelines for Electrofishing Waters Containing Salmonids Listed Under the Endangered Species Act" (available from NMFS), or else requires a section 10 research permit from NMFS prior to commencing operations.

A.8 HABITAT RESTORATION LIMITS ON THE TAKE PROHIBITIONS

Certain habitat restoration activities that are likely to contribute to conserving threatened salmonids are not subject to the take prohibitions. NMFS finds that projects based on a watershed or basin scale are likely to be the most beneficial at conserving threatened salmonids. Incidental take of threatened salmonids that results from a habitat restoration activity would not be prohibited provided that state agencies have certified in writing that the activity is part of a watershed conservation plan consistent with the watershed plan guidelines that NMFS has approved, and NMFS concurs. Until a watershed conservation plan is implemented or until two years following the effective date of a final 4(d) rule (whichever comes first), incidental take resulting from six specified categories of habitat restoration activity would not be prohibited if conducted in compliance with conditions and guidance listed in the rule. If no conservation plan has been approved for a watershed after two years following the effective date of the interim rule, the general take prohibitions applicable to all other habitat-affecting activities would apply to individual restoration activities.

A.9 WATER DIVERSION SCREENING

A widely recognized cause of mortality among anadromous fish is operation of water diversions without adequate screening. While state laws and federal programs have long recognized these problems and encouraged or required adequate screening of diversion ditches, structures, and pumps, large numbers of diversions are not adequately screened and remain a threat, particularly to juvenile salmonids. NMFS limits the application of take prohibitions for any diversion screened in accordance with NMFS Juvenile Fish Screening Criteria, Northwest Region, revised February 16, 1995, with a May 9, 1996, Addendum (available from NMFS). The limitation on take prohibitions applies only to physical impacts on listed fish due to entrainment or similar impacts of the act of diverting.

A.10 ROUTINE ROAD MAINTENANCE

The Oregon Department of Transportation (ODOT), working with NMFS, has refined its routine road maintenance program (RRMP) to protect listed salmonids and their habitat and to minimize the impacts of road maintenance activities on receiving streams. The program governs a wide variety of maintenance activities, including surface and shoulder work; ditch, bridge, and culvert maintenance; snow and ice removal; emergency maintenance; and mowing, brush control, and other vegetation management. The

program directs activity toward favorable weather conditions, increases attention to erosion control, prescribes appropriate equipment use, governs disposal of vegetation or sediment removed from roadsides or ditches, and includes other improved protections for listed salmonids, as well as improving habitat conditions. NMFS does not find it necessary and advisable to apply take prohibitions to routine road maintenance work performed consistent with the ODOT's 1999 *Maintenance of Water Quality and Habitat Guide* (Guide), because NMFS believes that doing so would not increase the level of protection provided for threatened salmonids. The Guide governs only routine maintenance activities of ODOT staff. Other activities, including new construction, major replacements, or activity for which a U.S. Army Corps of Engineers permit is required, are not covered by the routine maintenance program and, therefore, would remain subject to the take prohibitions. NMFS limits the application of take prohibitions for any incidental take of threatened salmonids that results from road maintenance activities (other than pesticide spraying and dust abatement), so long as the activity is covered by and conducted in accordance with the Guide.

Additionally, Limit 10 exempts RRMPs that are determined to contribute, as does ODOT's Guide, to the attainment and maintenance of properly functioning conditions, or the sustained habitat-forming processes necessary for long-term viable salmonid populations. This route may be most useful for states other than Oregon and counties and municipalities within those states where it would be impractical or inappropriate to adopt ODOT's Guide. Limit 10 also allows for amendments to a previously authorized RRMP provided NMFS reviews and approves of the changes consistent with the conditions described in the limit.

A.11 PORTLAND PARKS INTEGRATED PEST MANAGEMENT

The city of Portland, Oregon, Parks and Recreation has been operating and refining an integrated pest management program for several years, with a goal of reducing the extent of its use of herbicides and pesticides in park maintenance. The program's decision tree places the first priority on prevention of pests (weeds, insects, disease) through policy, planning, and avoidance measures (design and plant selection). The second priority is on cultural and mechanical practices, trapping, and biological controls. Use of biological products is considered the third priority, and use of chemical products is to be considered the last priority. Portland, Oregon, Parks and Recreations overall program affects only a small proportion of the land base and waterways within Portland, and it serves to minimize any impacts on listed salmonids from chemical applications associated with that specific, limited land base. NMFS believes it would contribute to conservation of listed salmonids if jurisdictions would broadly adopt a similar approach to eliminating and limiting chemical use in their parks and in other governmental functions. Portland, Oregon, Parks and Recreation has developed special policies to provide extra protections near waterways and wetlands, including a 25-foot buffer zone in which pesticide types are limited, and application is spot-applied. After careful analysis of Portland, Oregon, Parks and

Recreation's integrated program for pest management, NMFS concluded that it provides adequate protection for threatened salmonids with respect to the program's limited use of the listed chemicals. NMFS does not find it necessary and advisable to apply additional federal protections in the form of take prohibitions to activities conducted under this integrated pest management program.

A.12 MUNICIPAL, RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT AND REDEVELOPMENT

As a general matter, significant new economic development has the potential to degrade threatened salmonid habitat and to injure or kill salmonids through a variety of impacts. Appropriate safeguards can be specifically tailored to minimize impacts on threatened salmonids to an extent that makes additional federal protections unnecessary for conservation of the listed DPS. NMFS proposes not to apply take prohibitions to planning efforts, ordinances, regulations, and programs (promulgated by city, county, and regional governments) that conserve listed salmon and steelhead by regulating or otherwise limiting activities associated with Municipal, Residential, Commercial, and Industrial development. Similarly, take prohibitions would not be applied to development consistent with an Urban Reserve Plan that Metro has evaluated and approved as in compliance with adequate guidelines. Guidelines or ordinances must ensure that urban reserve plans or developments will adequately address 12 issues, including appropriate siting, storm water discharge impacts to water quality, quantity, and hydrograph characteristics, riparian buffers, avoidance of stream crossings by roads wherever possible, protecting historic stream meander patterns and wetlands, preserving flood capacity, and erosion control. Where NMFS finds ordinances or Metro guidelines adequate, imposition of take prohibitions is not necessary or advisable.

A.13 FOREST MANAGEMENT IN WASHINGTON

In the state of Washington, discussions among the timber industry, Tribes, state and federal agencies, and interest groups led to a February 22, 1999, Forest and Fish Report (FFR) presented to Governor Locke. The report provides important improvements in forest practice regulation. If implemented by the Washington Forest Practices Board in a form at least as protective as that laid out in the FFR, these improvements will provide an enhanced level of protection to listed salmonid species. The FFR also mandates that all existing forest roads be inventoried for potential impacts on salmonids through culvert inadequacies, erosion, slope failures, and the like, and all needed improvements be completed within 15 years. Because of the substantial detrimental impacts of inadequately sited, constructed, or maintained forest roads on salmonid habitat, this feature of the overall FFR provides an important conservation benefit for listed DPSs in Washington. NMFS does not propose to apply take prohibitions to non-federal forest management activity conducted in the state of Washington that is in compliance with the FFR.

A. 14. TRIBAL RESOURCE MANAGEMENT PLANS

The United States has a unique legal relationship with Indian tribes as set forth in the Constitution of the United States, treaties, statutes, executive orders, and court decisions. The appropriate exercise of its trust obligation commits the United States to harmonize its many statutory responsibilities with the tribal exercise of tribal sovereignty, tribal rights, and tribal self-determination. With respect to the above described limits, NMFS determined it is not necessary and advisable to apply the section 9 take prohibitions to specified categories of activities that contribute to conserving listed salmonids or are governed by a program that adequately limits impacts on listed salmonids. Similarly, NMFS determined it is not necessary or advisable to prohibit activities associated with tribal resource management activities when those activities conserve listed salmonids or adequately limit impacts on listed salmonids. Under this limit, a tribe could conduct tribal trust resource management actions that may take threatened salmonids, without the risk of violating take prohibitions adopted under ESA section 4(d). Eligibility for this limit requires a determination by the Secretary that implementing a specific tribal Plan will not appreciably reduce the likelihood of survival and recovery of the listed species. This limit on take prohibitions would encompass a variety of types of Tribal Plans, including but not limited to, plans that address fishery harvest, artificial propagation, research, or water or land management. Tribal Plans could be developed by one tribe or jointly with other tribes. Where there exists a Federal court proceeding with ontinuing jurisdiction over the subject matter of a Tribal Plan, the plan may be developed and implemented within the ongoing Federal court proceeding.

APPENDIX B - EXCERPTS FROM 2006-2007 WASHINGTON FISHING RULES

(Available on the Internet at: http://wdfw.wa.gov/fishcorn.htm)

Statewide Freshwater Fishing Regulations for Steelhead (p. 29)

- Min. size 20".
- Daily limit 2.
- No more than 2 STEELHEAD may be retained as part of TROUT combined daily limit.
- Annual limit 30 STEELHEAD statewide per license year (April 1-March 31).
- STEELHEAD may be caught and released until the daily limit is retained.
- *WILD STEELHEAD RETENTION RULES:* As part of the STEELHEAD annual limit, ONE wild STEELHEAD per license year may be retained from ONE of the following rivers: Bogachiel River, Calawah River, Clearwater River, Dickey River, Goodman Creek, Green/Duwamish River, Hoh River, Hoko River, Pysht River, Quillayute River, Quinault River, or Sol Duc River as listed in the special rules. {Emphasis added. This is the only stream within the range of the Puget Sound steelhead DPS; see Special Rules summary below.}

Westside Rivers Special Rules for Green (Duwamish River) (p. 39)

River Segment	Wild Steelhead Retention Allowed:
From 1st Ave. South Bridge to Tukwilla International Blvd./Pacific Hwy. South	July 1-July 31 and Sept. 1-Nov. 30
From Tukwilla International Blvd./Pacific Hwy. South to SW 43rd St./S. 180th St. Bridge	July 1-July 31 and Sept. 16-Nov. 30
From SW 43rd St./S. 180th St. Bridge to S. 277th Bridge in Auburn	July 1-July 31 and Oct. 1-Nov. 30
From the S. 277th Bridge to Auburn-Black Diamond Road Bridge	July 1-Aug 15 and Oct. 16-Nov. 30
From the Auburn-Black Diamond Road Bridge to the Tacoma Headworks Dam	July 1-Nov. 30